A Cycle of Discussion and Inquiry

My classroom observations and collaborations over the past 7 years have included work with the team of 5th-grade teachers featured in the previous two chapters, with three high school English teachers, and with a community college teacher. I was especially interested in looking into their classrooms because these teachers expressed their intent to teach in an inquiry-based way, and they noted that they valued authentic discussion as a key element in an inquiry process. Recognizing that Nystrand's (1997) research reveals that authentic discussion is rare, I acknowledge that the teachers whom I observed and interviewed were far from representative of teachers in general. I also acknowledge that the teachers worked under rather favorable conditions, in schools that had sufficient resources, where parents were supportive, and where learners were generally enthusiastic and cooperative. But the practices that these teachers followed do not require abundant resources or supportive parents; the teachers found replicable ways to initiate and sustain inquiry and discussion to prepare students to write and to develop command of the procedures for critical thinking and composing.

In this chapter I focus attention on one 9th-grade English teacher. She teaches in a "high-performing" school, with students who come from middle-class and upper-middle-class homes. It is important to note this specific context, because the teacher's practices as a designer and initiator of inquiry and as facilitator and manager of discussions may not be appropriate for every student population. At the same time, most teachers would likely benefit from following many of the teacher's practices in planning for discussions, in linking them together, in facilitating large-group discussions and managing small-group work, and in building one discussion upon another in an inquiry progression. The 9th-grade teacher, Ms. Edsel, who is featured in the next chapter as well, relied on a simple device to tap prior knowledge and introduce students to the focus for shared inquiry. She designed structured forums in which the learners could talk in a purposeful way, specifying intended outcomes and parameters for talking. She built one discussion upon another to advance students' understanding and refine their thinking and the language with which they discussed complex concepts.

I observed the teacher during three lessons, on alternate days, and discussed with the teacher the activities from the days when I could not visit the class. I focus, then, on a sequence of five class meetings. I draw from interviews with the teacher to project the further application of procedures developed during the discussions I observed. My observations of this one teacher revealed to me two rather obvious conclusions: (1) All discussions are not the same; they do not all serve the same function; and (2) the nature of discussions depends on the structures and expectations that the teacher, as the orchestrator for learning, establishes. Taken together, these two observations suggest that for the strategic teacher, discussions are not isolated intellectual moments, but are part of a larger cycle intended to advance deep understandings and important proficiencies for problem solving, social interaction, and written composition.

I hope to illustrate these two conclusions by showing the students in action during small-group work and in whole-class discussions. The teacher prompts the discussions with two different inquiry-based activities. As the activity changes, and as the phase of the activity changes, the students' discussion changes, but it builds on itself. With the help of research assistants, I have coded the discussions to quantify the students' discourse moves. The series of graphs that summarize the discourse contributions in each discussion illustrate the contrasts among discussions, and I hope that the graphic representations reveal the different functions of the discussions and the scaffolding effect that shows how one discussion depended on the previous one.

DISCUSSION AND LEARNING
SOME PROCEDURES FOR DEFINING

The 9th-grade teacher, Ms. Edsel, introduced a unit of instruction by noting that the students ultimately would be working with some literature in which the authors seem to imply that all human beings have an obligation to help their fellow human beings. Noting current political debates, Ms. Edsel observed that many thinkers test the assumption of obligations to serve others, seeing this obligation as an impingement on personal liberty. She noted that the class would begin by attempting to define the notion of *obligation,* as the term is used in appeals to help fellow human beings, and to rely on the defining criteria that the students might develop to evaluate the behavior of characters in fiction and to appraise the implications of the authors' narratives. Ms. Edsel then initiated the inquiry with the following survey, which the students first completed individually and then brought to their small-group discussions in groups of three or four students.

SURVEY: WHAT IS YOUR OBLIGATION TO OTHERS?

Directions: Read each of the following statements and circle the extent to which you agree or disagree with the statement, using the following scale:

    4 = strongly agree
    3 = agree
    2 = disagree
    1 = strongly disagree
    0 = not sure

Be as candid as possible. Support each of your responses with an example from popular culture, personal life, news stories, literature, etc. Then write a rule that supports the position you take.

1. I am my brother's keeper.
2. Being a best friend means that you always have your friend's back, no matter what.
3. When a child misbehaves, it is the parents who are at fault.
4. It is OK to use friends to your advantage, but only if one gets something out of the relationship as well.
5. Friends should always wish for the best for one another.
6. In school, when students work in small groups, they are responsible for the work of their fellow group members.
7. Blood is thicker than water.
8. The boss should be friends with his or her employees.
9. Teachers should always get to know their students' likes and dislikes.
10. If you are friends with someone on Facebook, you always have to wish that person "happy birthday" on his or her birthday.

    The following exchange represents a typical portion of conversation among students across the class as they reacted to the set of statements in the survey. Although Ms. Edsel did not designate a group member as the discussion facilitator, one student assumed the lead to begin the conversation, and the discussion progressed from her initial reporting of her judgment about the first statement.

Adrian: OK . . . so, the first one is "I am my brother's keeper," and what I said was it depends whether you're younger or older, because typically, if you're younger, then you'll look up to your older siblings, almost as a parental figure, because they have more experience than you.

Bob: So, what did you say, though? Like agree, not sure . . . ?

Adrian: I said, agree if you're older, and, uh, um, younger is, it's not as much, so I say semi-agree [laughs], if you know what I mean. Because it's kinda like, you look up to your younger, like, your younger brother, but, um, I mean, if you're younger, you don't really take care of your older siblings. I mean . . .

Kanji: I mean, you can, if you're old enough and are able to.

Bob: Yeah, or, or if they need the help, and, like, if they're not, like, I guess physically able in this situation or mentally able, then you're sort of in a position where you have to be their keeper, in order for them to sort of, like . . .

Kanji: It's very situational.

Bob: Yeah, yeah, that's why I put down more of a not sure than . . .

Kanji: [indistinct] I put agree.

Adrian: Yeah, I said agree, too.

Bob: For the most part it's agree, but . . .

Kanji: The second one . . .

Adrian: Oh, we have to give an example, too.

Bob: OK, I don't think . . .

Adrian: I said *My Sister's Keeper*, the movie.

Kanji: That's what I was thinking, too.

Bob: That's what I was thinking, not that I read it or watched it, not that that it has something to do with my sex or anything, but, um, I, like, a bunch of girls talked about it in like 5th grade, and they told me about it, and I guess I thought about that example.

Adrian: Well, technically, because the girl is younger . . .

Others: Yeah.

Adrian: When you think about it . . .

Kanji: That makes sense.

Adrian: So I kind of agree with it.

Bob: Or almost like . . .

Adrian: I don't know if I strongly agree, but I say I agreed with it.

Kanji: Yeah. I have an example. I don't know if, you guys probably haven't seen the show, but I watch *The Carrie Diaries*, and, yeah, but the little sister, because their mom died, the little sister, she's, like, really getting taken care of by her older sister.

Adrian: Even in, like, *I-Carly*, her brother, like, looks after her.

Kanji: So it's kind of like in television and in pop culture and it kind of shows that siblings do take care of each other.

Bob: Yeah, I remember reading . . .

Kanji: Yeah, we should go on to the next one, sorry.

Adrian: [indecipherable] . . . that friends should have your friend's back no
   matter what?

Bob: I'm leaning towards not sure, towards disagree.

Kanji: Really?

Bob: It, it really, like you said before, it depends on the situation, like, if
   your friend's the kind of guy that gets into fights a lot, then, I mean,
   why would you have his back if he's causing a bit of, um, trouble?

Kanji: Well, I was thinking, like, if you're best . . . there's a reason you're
   best friends. You're best friends, you should be having each other's . . .

Bob: Yeah, but I think it's not for every single situation, because they could
   be getting into things that you're not, you shouldn't be involved in,
   and . . .

Kanji: Then, do you really wanna be their best friend? I mean . . .

Bob: Well, that's . . .

Adrian: Well, an example is *Friends*. That came to my mind, because
   they're always there for each other no matter what, like they get into
   crazy situations . . .

Kanji: Yeah.

The discussion above represents what Barnes (1992, 2008) and Smagor-
insky (2007) call *exploratory talk*. Perhaps the sequence of discussions, even
as they become a bit more refined and complex, remain exploratory; but this
initial phase of the sequence reveals the students in discovering the positions
held by the members of the group. The conversation is a kind of sharing
and groping, with students initially expressing uncertainty about their own
positions and the positions of their partners. Prompted by the teacher, the
small-group members move on to identifying examples of situations that
would support the positions they hold. They cite brief narratives from mov-
ies or television programs and explain how the narratives influence their
judgments or illustrate their decisions. As the conversation progresses, the
students affirm, question, or qualify the conclusions expressed by partners.
For example, the group appears to agree that one has a responsibility to sup-
port a friend, unless that friend consistently gets into trouble that also might
compromise the supportive friend.

In the small-group discussion, not only are the students engaged in the
procedures for asserting claims, supporting the claims with examples, and
explaining those examples, but they also are refining their conclusions. The
process appears to be leading to the expression of a set of rules or warrants
that will be useful in subsequent discussions when the students share their
prepared analysis with the entire class, in a forum that will invite others to
cite different examples and perhaps express different warrants.

PUTTING ARGUMENTS TOGETHER

After the students had spent approximately 25 minutes in small-group discussion about the survey items, the teacher called the class to come together to share their conclusions and analyses. The following excerpt from that exchange represents the kind of exchanges that occurred in the large-group forum. While the talk continues to be exploratory, the students move to another level of refinement of their thinking. Each student's conversational turn is longer than the typical turns in the small-group discussions, and the teacher plays a more assertive role as facilitator.

Ms. Edsel: So, over the course of the next, you know, 2 to 3 weeks, we'll be looking at this notion of *obligation*. What we're going do now is share some of the arguments or situations with the class, and I do suggest that on the back of the sheet, you take some notes, to define obligation, or to define questions we're uncertain about, for establishing different relationships that related to obligation. So as we're going through this, it's probably a good idea to take notes, because you'll reflect on these notes as we move forward in the inquiry. So, does some group or one person want to start with either something they're really certain of? Something where you put just "not agree."

Haley: OK, can I start with any of these?

Ms. Edsel: Any of them.

Haley: OK. So I wanna start with the one about whether the boss should be friends with his or her employees, because I think this is the one that I, like, knew my, like, opinion on the most. So I said disagree, because, um, I'm going to give an example of the show *The Office*; in *The Office*, half of the employees never get their work done because they're too busy having fun, and the bosses can't yell at them because they don't wanna be bad friends. So, if you think about it, um, if someone's trying to be friends with someone, like, in a workplace, they lose, like, that authority figure, and they go into kind of more of like a friend figure, and they can't have any, um, any respect for them anymore. So you really need to have those roles set straight. So I said disagree.

Mike: Going along with her point, I also said disagree, and I wrote the show, my example is George Lopez, because he's like the boss of the comp-, of the place, and he, and his friends work there, and he doesn't let them get fired in many episodes, even though they're not good workers and stuff . . . [indecipherable]

Haley: I agree with you, because if the boss becomes friends with his workers, then their workers will slack off, thinking their job is secure

because their friend is the boss. And also, it would be really hard to fire somebody that was your friend.

Bob: So I agree with all of you to disagree. And I also took it not just as a matter of respect and a matter of firing your friends; I also took it in the sense that the point of your job and your workplace is to get things done, and to actually continue production or to continue your job, and in this situation, like we said with *The Office*, if the boss was friends with his or her employees, then it would slow down production and it would slow down whatever you're trying to do, and that's kind of the purpose of a workplace, to be doing what you have to do in order to get paid, and this would completely, just, like, alter it. And a boss doesn't have to be friends with his or her employees. Like, they can choose to do whatever they want. It's not a *should be* or a *have to be*; it's just a *want to be*.

Eleanor: I said agree, because in the movie *Horrible Bosses*, the employee and the boss are, like, enemies; they, like, hate each other. And then, like, it ended up with, like, the employee quitting because they're, like, so hard to get along with. So I think sometimes it's a good thing to be friends with your boss.

Samantha: I . . . well, when I was reading it, I said not sure, because I asked a question, like, will it affect each other's work habits, and I think it, like, depends, like, if they're able to, like, still work in wherever they are, then it should be OK, because it's always good, to, like, be able to talk to, like, someone. But if it's gonna affect how they work and how the finished product ends up, then I think it's not OK.

Ms. Edsel: So you think we need to ask the question, Samantha, does it affect the work habit, and then make a decision?

Leticia: I agree with that, and, like, along with Bob's point, I'd move it to, teachers should get to know their students' likes and dislikes, like, along the same line. It's a teacher's job to teach, but it's not their responsibility to have a personal . . . well, they can have a personal relationship, but it's not like they must. Their main focus should be teaching, just like the boss and their employees, their main focus should be work. And if a friendship comes along from that, that's OK, but it's not, like, required.

Cassie: Going back to Eleanor's point, I disagree with her point, because in the movie they were enemies, but it doesn't say in this statement, it doesn't say, like, that the boss, if the boss isn't friends with them that they have to be enemies. They just have to be neutral with each other. Michael . . .

Michael: I actually agree with what he said, too, but I think it's more, like, it's more on the obligation of the employee to be friends with the boss, but it isn't the boss' obligation to be friends with the employee.

Ms. Edsel: So you think, so you're saying that it's the boss', it's the employee's obligation to be friendly to the boss, but it's not kind of the boss' obligation to kind of create a relationship with . . . . Why do you say that?

Michael: Because the, the employee has to . . . the employee works for the boss, the boss is, is, he's the employer, so he, basically he gets the say on [indecipherable] fire people [indecipherable] king–servant relationship . . .

Ms. Edsel: A king–servant relationship.

Bob: So you're saying it's OK to suck up, but it's not OK to be friends with people who are below you?

Michael: No, you're not obligated to. He can do that, but he doesn't have to.

Bob: When have you ever heard of a situation where a king couldn't be friends with a servant because he's not obligated to, though?

Michael: Exactly.

[indecipherable whispering and cross-talk]

Ms. Edsel: Guys.

Michael: Because most of the time, the boss has, like, another boss, so if he, like, expects his boss to be, like, friendly with him, then he should also be friendly with his, like, workers, like, under him.

Adrian: So this, because this, I think you also, one of you said about how a teacher should also get to know their students' likes and dislikes, it goes right with that, I think, because, I think school and work is about putting aside social interests, and just teaching the students or doing a job, because you don't get hired for a job to be friends with people. It's that line, you know, that quotation, um, "Let's make this a purely, um, professional relationship." That's how it should always be in school and work, because it's really not a social environment, so, that's what I have.

Allen: Going back to Bob's point, you said that, um, a king can't have a relationship with a servant.

Bob: I said he wasn't obligated to. No, no, no, wait . . . you said . . . never mind.

Allen: I think, remember, you said that . . . Michael said that he could have it but he wasn't obligated to, but you said have you ever heard of a king being friends with a servant?

Bob: Yes.

Allen: Well, what about the TV show *Merlin*?

I have observed hundreds of hours of classroom instruction, and rarely have I seen discussion of this sort. I am struck first by the length of the contributions. In a sense, the students seem to have worked out their arguments

and rehearsed them in the small-group forums. Each contributor comes to the large-group discussion with fully developed arguments—assertions supported by examples, interpreted by invoking a relevant warrant. The teacher had planned purposefully for this sequence so that the students began in small groups by reacting to statements, discovering illustrative examples, and explaining the connections between the examples and the assertions that they support.

The teacher initiates the discussion by noting the purpose for the talk. She encourages the students to take notes because they will later write an extended definition. In other words, she infuses the talk with purpose, and she connects the current discussion to subsequent activities in the sequence of learning. The teacher provides the students with some choice about where to begin the discussion in response to Haley's question, "Can I start with any of these?" The teacher might be the gatekeeper for the contributions, perhaps nodding or pointing to students to select them as speakers, but these cues are not indicated in the recordings. Instead, the students take responsibility themselves for taking turns and responding to one another.

In the large-group discussion, the students practice what Collins (1982), Nystrand (1997), and Applebee, Langer, Nystrand, and Gamoran (2003) call *uptake*: that is, the building on another speaker's contribution to situate and extend the thinking about the topic. Leticia notes, "I agree with that, and, like, along with Bob's point, I'd move it to, teachers should get to know their students' likes and dislikes. . . ." Michael says, "I actually agree with what he said, too, but I think it's more. . . ." Adrian introduces her contribution in this way: ". . . one of you said about how a teacher should also get to know their students' likes and dislikes, it goes right with that. . . ." These examples of uptake are more than the courteous behavior of acknowledging another speaker. They reveal an extension of thinking—that the speaker knows how others are thinking about the question of obligation, that the speaker wants to insert an addition to the previous contributions, and that the speaker will offer a variation or possible refinement of what has already been said, especially since the class is working toward a common understanding or definition of what *obligation* means.

In a sense the small-group work begins with sorting through positions relative to the survey statements, prompting each group member to voice a claim. Then the students work toward citing a relevant example and explaining it. In the large-group discussion, the students come already equipped with their examples and their analysis. The large-group discussion does not reveal students disputing one another about the examples; instead, the students offer alternative examples. If they contest one another, the disagreement focuses on the interpretation of the example: its relevance and its wording. For example, Adrian builds on previous comments to offer

a qualified rule: "I think school and work is about putting aside social interests, and just teaching the students or doing a job, because you don't get hired for a job to be friends with people."

While the stated purpose for the sequence of discussions is to define the abstract concept of *obligation*, the definition will require argument, in the sense that the defining strategy includes supporting criterion statements with relevant examples and explaining the connection between the examples and the statements (Hillocks, Kahn, & Johannessen, 1983). In other words, the inquiry process that leads toward a definition requires argument in the sense of units of logical thought. In both the small-group and large-group discussions in Ms. Edsel's class, the 9th-graders practice some procedures for argument, including making claims, supporting them with examples, interpreting the examples with warrants, recognizing rebuttal positions, and evaluating the merits of the rebuttals.

In the large-group discussion, Ms. Edsel manages the conversation, but makes few substantive contributions. She initiates the conversation. Later she paraphrases the speaker's contribution and checks for the accuracy of her representation: "So you think we need to ask the question, Samantha, does it affect the work habit, and then make a decision?" She also prompts the speaker to elaborate in a way that asks for justification for an assertion: "So you think, so you're saying that it's the boss', it's the employee's obligation to be friendly to the boss, but it's not kind of the boss' obligation to kind of create a relationship with. . . . Why do you say that?" Sometimes, Ms. Edsel redirects the conversation when it appears that the students speak over one another and lose their focus.

It is also noteworthy that across the small-group discussions and the large-group discussions, there is almost no apparent social conversation. When a research assistant and I initially coded the transcripts, we thought we had identified one instance over six discussions across three class meetings that we could label as social conversation. There are probably many steps that the teacher took to foster a classroom where students could take responsibility for contributing to discussions in civil and rational ways. At the same time, it appears that at least three factors influenced how students conducted themselves in a purposeful way in small-group and large-group meetings: (1) The teacher connected the current discussion to the broader program of inquiry and to long-term outcomes; (2) the teacher identified a specific purpose for each discussion; and (3) the teacher expressed specific expectations for each discussion, including the length of time for the small-group work and the target outcome for the discussion. These should probably be conventional routines in every classroom, but are seldom attended to with as much care as Ms. Edsel appears to take. I suggest that a teacher's planning class discussions around these routines will provide the foundation for successful interactions of the type observed in Ms. Edsel's class.

COMPLICATING THINKING BEHIND ARGUMENTS

While the class arrived at a preliminary expression of criteria for defining an abstract concept, Ms. Edsel extended the discussion to refine the criterion statements and to test them against specific situations (see Appendix A for the complete set of problem-based scenarios). Ms. Edsel anticipated that the discussion of problem-based scenarios might be new to her 9th-graders, so she began by modeling the discussion of the first scenario and then turned over responsibility to the students in groups of three or four. This practice of modeling and then releasing responsibility to the students is consistent with the practices that Smagorinsky and Fly (1993, 1994) report, with students imitating the behaviors that the teacher models when she facilitates discussion. Specifically, Ms. Edsel modeled how to initiate the discussion, how to encourage participation, how to build on contributions, how to paraphrase, and how to react respectfully to responses. Teachers who seek to make small-group work more productive and meaningful would do well to follow Ms. Edsel's example in practicing her facilitation routines and her careful sequencing of discussion opportunities. In the following excerpt, the teacher prompts the students to begin, and they assume responsibility.

Ms. Edsel: So now what you're going do in your groups for the next 10 to 15 minutes is look at scenarios two, three, and four. Use the graphic organizer to complete . . . so we've got what the problem is, solutions, we've talked about the warrants, and then as you're working through what you are learning about obligation. OK. So now in your groups, two, three, and four, about 10 to 15 minutes, and then we'll share in the big group and we'll do the other. All right, go ahead.

Cassie (reading from the handout): . . . invited and frequently bad-mouthed by Alicia. On the rare occasion that Jenni is invited, and Jenni cannot make it due to family and school conflicts, Alicia calls her a bad friend. This pattern of behavior has gone on for quite some time, but so far Kristi has chosen not to intervene. As time passes, Jenni is becoming more and more upset and hurt, and asks Kristi to do the same, something to Alicia . . . asks Kristi to say something to Alicia, but Kristi still doesn't want to get in the middle of it. What should Kristi do?

Mike: OK, so . . . I think she should, like, talk to Alicia.

Allen: Who? Kristi?

Mike: Kristi.

Cassie: I think, yeah. Because she's bad-mouthing her friend, and it makes her uncomfortable, and she's being a bad friend for making her friend uncomfortable.

Mike: Yeah.

Cassie: So I think she should . . .

Mike: Like, at least tell Alicia not to talk about her friend like that.

Cassie: Like, they don't have to be friends, but they don't have to bad-mouth each other.

Allen: [indistinct] if she should say something to Alicia.

Ms. Edsel (joining the group briefly): Again as you're looking at the scenarios, think of, and analyze all the people in the relationship.

Allen: I think she should say something.

Mike: So the warrant would be, like, one should, like, defend their friends.

Leticia: One should attempt to preserve friendship.

Allen: I don't think Kristi did anything.

Cassie: I think we should say Kristi hasn't . . .

Leticia: But it's, like, her friend that was saying things. It's just that . . .

Allen: Are you responsible for what your friends do?

Leticia: But she's being a bystander.

Cassie: Well, if it makes her uncomfortable, she should say something.

Allen: It doesn't make her uncomfortable.

Cassie: Yeah, it does.

Allen: How do you know?

Mike: Wouldn't you feel uncomfortable?

Allen: [indecipherable]

Cassie: It says as the time passes, Jenni's becoming more and more upset and hurt, and Kristi asks . . . still doesn't say anything, and Kristi doesn't want to get in the middle of it. So that shows that she's uncomfortable.

Allen: Jenni's not friends with Alicia.

Cassie and Mike: Yeah, they both are.

Cassie: She says . . . she doesn't want to get in the middle of it; she'd be uncomfortable getting in the middle of it.

Allen: It means she doesn't care.

Mike: No, it doesn't.

Allen: Look; if you're uncomfortable [indistinct] about something, you kind of, like, stand up for that person, you try to take care of them. You're not just gonna sit there and do nothing.

Mike: No, *uncomfortable* means, like, you don't feel comfortable in a situation, you don't wanna, you wanna back off.

Allen: That's not friends . . . [indecipherable] So that means [indecipherable]

Cassie: [indecipherable] How does this scenario . . . I think obligation, that Kristi has an obligation to be a friend to both of her friends.

Allen: [indecipherable]

Cassie: You write your own thing, then, Michael.
Mike: So, friends have, like, an obligation to, like, protect their friends.
Leticia: A true friend would always have their friend's back.

This is the fourth discussion in a sequence of discussions: small-group discussion of survey statements, whole-class debriefing about the survey discussions, the teacher's modeling of the scenario discussion, and the small-group discussion of a set of scenarios. Again, the last discussion is different from previous discussions. Earlier, the students reacted to the survey statements and derived a tentative list of criteria for defining *obligation*. But when a group of discussants agree to a set of rules or warrants, they may not agree on the application of the rules. The discussion of the scenarios focuses on attempts to refine warrants. In the small-group discussions about the scenarios, the students do not invent examples, because the scenario itself is the example available for illustrating claims. If there are challenges, in the form of questioning or disagreeing, the challenges focus on the warrants. It appears that the small-group discussion extends the students' thinking about the concept of *obligation*, with the participants working toward refinement of their criterion statements. As the students finish discussion of the second scenario, Mike offers this: "So, friends have, like, an obligation to, like, protect their friends." Leticia proposes in return that "a true friend would always have their friend's back."

A PATTERN ACROSS A DISCUSSION SEQUENCE

In the 9th-grade classes that I observed, there were two more steps in the process: the teacher-led, whole-class discussion of some of the scenarios and small-group discussion of the remaining scenarios. In total, then, over three class meetings, the students participated in six discussions. In each case, I audio-recorded the discussion. In the case of the whole-class discussion, I recorded all of the participants. In the case of the small-group discussions, I randomly selected one group to record on each occasion. While I recorded one small group, I could observe all of the groups. The teacher and I agreed that the recorded group was representative of what occurred in each group.

A research assistant transcribed all of the recordings. I developed a system of codes (Appendixes B and C), based on anticipation of the utterances that one was likely to hear in discussions designed to prepare students for writing an extended definition essay. See Appendix B for a description of the method of developing the codes and refining them. Since the length of each discussion varied, I report the data in percentages. Appendix D offers a

summary of the percentages across discussions. Figures 5.1–5.6 (pp. 92–93) offer a graphic representation of the differences across six discussions.

While all of the discussions were in a sense *exploratory*, the initial discussion appears to have been a process of revealing the positions of the discussants. In the initial discussion, the students also derived examples to support their judgments and explained to one another how the examples aligned with their judgments. In the subsequent large-group discussion, the contributors offered more fully developed arguments, in the sense of making a claim, citing an example, and explaining the example. It appears that the initial small-group discussion prepared the learners to express arguments fully in the large-group discussion. The large-group discussion exposed the whole class to a variety of arguments, built on a variety of examples. The students did not often contest one another's judgments; instead, they extended the discussion by citing alternative examples and variations on the wording of warrants. With the teacher facilitating the large-group discussion, the students appeared to balance their contributions with the expressing of claims, citing data in the form of examples, and interpreting the data.

In the initial large-group discussion about a scenario, the teacher models the process that she expects the students to follow in their small groups. Since the scenario presents a problem, the students disagree and express some challenges, which are an important part of the process and can be handled civilly. In the small-group discussions about the scenarios, the students rely on the scenario itself as the example to illustrate claims. The students initially disagree a good deal about the action that the character in the scenario should take, especially in contrast to the initial discussion about the survey responses (21.5% of contributions in the scenario discussion vs. 4.0% during the survey discussion). The challenges and disagreements focus mostly on the warrants that students express to interpret the scenario to arrive at a judgment about the character.

The data in Appendix D and represented in Figures 5.1–5.6 reveal that not all of the discussions leading to the writing of an extended definition were the same. Each discussion appears to have served a different function; for example, discovering one's position and the positions of peers, finding examples to support claims, deriving warrants, testing arguments among a group of peers, responding to challenges, and refining arguments, especially the wording of warrants. It appears that the teacher thought strategically about the various functions and about the sequence in support of the writing of extended definitions. The various structures that the teacher used to prompt and manage discussion influenced the nature of the discussion. While the students took charge of the small-group discussions, the teacher orchestrated the whole process, noting target outcomes, setting time limits, and modeling the process.

Figure 5.1. Percentages of Contributions to Small-Group Survey Discussion
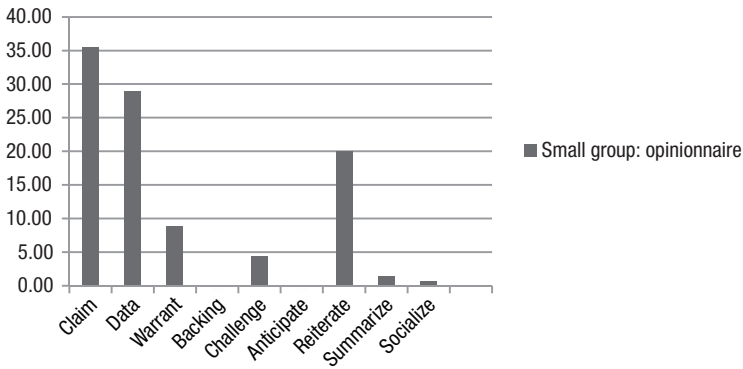

Figure 5.2. Percentages of Contributions to Large-Group Survey Discussion
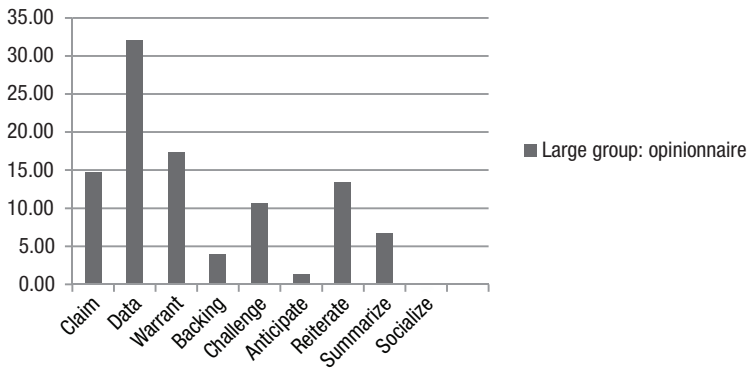

Figure 5.3. Percentages of Contributions to Large-Group Sample Scenario Discussion
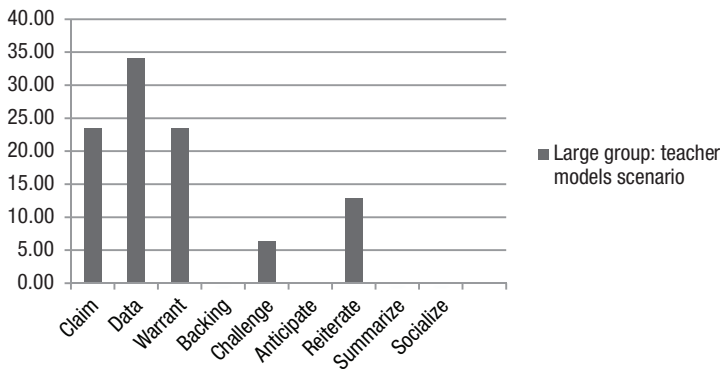
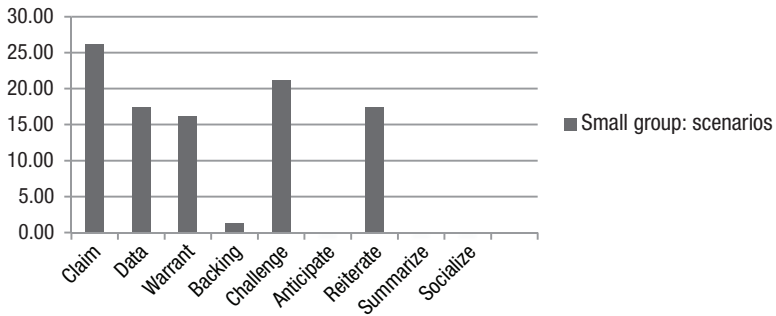**Figure 5.4. Percentages of Contributions to Small-Group Scenario Discussion**

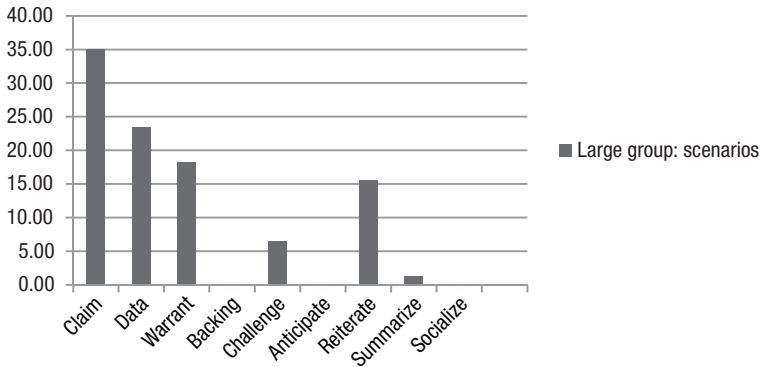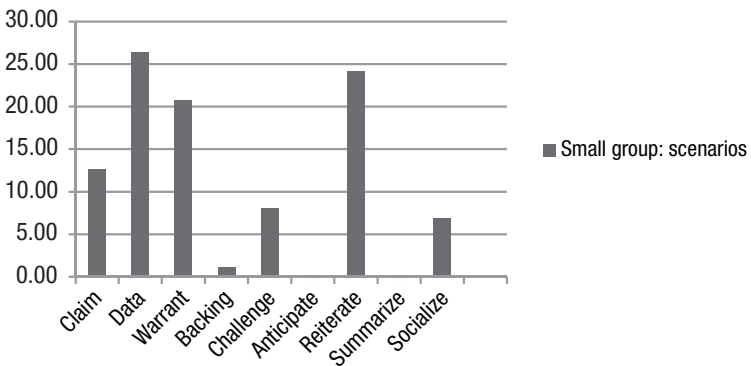**Figure 5.5. Percentages of Contributions to Large-Group Scenario Discussion**

Figure 5.6. Percentages of Contributions to Extended Small-Group Scenario Discussion

A PURPOSEFUL SEQUENCE OF INQUIRY AND DISCUSSION

Taken as a whole, the sequence of instructional conversations reveals a discussion and inquiry cycle, consisting of at least five phases, if one includes the extension of discussions as the students interact during the planning and composing of their essays and the application of a critical framework (i.e., the criteria for defining the concept of *obligation*) to the analysis of related works of literature. The five phases listed below are part of a broader inquiry process that relies on purposeful peer interaction, writing, and subsequent reading. As the teacher moves the students through the cycle, she monitors what they say, looking for evidence that the students have substantive knowledge, including the procedures for arguing and defining. The teacher's judgments about the learners' proficiency, as displayed during oral discourse, guide her decisions about the pacing of the discussions, the transitioning to a new phase in the sequence, and the possible return to, or review of, an earlier part of the sequence. Any teacher would be wise to follow Ms. Edsel's example in being conscious of the specific function of each discussion (e.g., to support claims with examples, to evaluate competing perspectives) and in looking for evidence that the students were practicing the procedures that the activity was designed to promote. Without relying on a paper-and-pencil assessment, a teacher can hear the evidence that students can or cannot formulate logical arguments and represent fairly and accurately the arguments of others. Three important instructional elements are at work here: (1) the scaffolding of experiences that build on students' knowledge and advance their thinking to greater and greater levels of complexity, (2) the conscious awareness of the specific function of each discussion, and (3) the attention to what learners are saying in order to judge whether they have sufficient command of the procedures that will be important for subsequent tasks and learning.

Taken as a complete cycle, the series of discussions in the observed 9th-grade class followed this function sequence, which extends beyond the preparation for writing and transfers to discussions of literature, and later written responses to the literature:

> *Exploring:* In this exploratory phase, usually in small groups, the learners take up the discussion of a problem and begin by exploring each participant's position. Since this is a time to discover each person's position, the participants begin by asserting claims. As the exploration continues, they prompt one another to support claims, with the support usually taking the form of distilled narratives as examples.

Drafting: Drawing from the earlier small-group discussion, with the teacher as facilitator, the participants put whole arguments together, expressing a conclusion supported by an example and interpreted by citing a general principle. The conversational turns are longer than in the small-group discussion. As the discussion progresses, participants challenge one another, with the challenges usually directed at the warrants.

Synthesizing: As the discussion progresses, with several speakers expressing fully constructed arguments, the speakers contend with many arguments, and the process now includes linking, comparing, and evaluating. The exposure to the body of arguments invites the participants to make complex judgments about the central problem.

Applying: The students apply the procedures as they write about the issue at the heart of the series of discussions. As the students move away from preparatory activities, they apply the procedures that they practiced in small-group and large-group discussions to their judgments about characters in a narrative and about the themes they derive from their reading.

Extending: Over time, the learners enter into new discussions that complicate and extend their earlier thinking, usually by asking them to reconcile discrepancies and to account for new factors. Students extend their discussions as they read other texts and begin to connect one to another.

This chapter traced the sequence of discussions in a 9th-grade English class, as the teacher moved the learners toward writing an academic essay and reading related texts critically. As I emphasized at the beginning of this chapter, the series of discussions suggest two important considerations for practice: (1) All discussions are not the same; they do not all serve the same function; and (2) the nature of the discussions depends on the structures and expectations that the teacher, as the orchestrator for learning, establishes. The discussions were part of a larger cycle intended to advance deep understandings and important proficiencies for problem solving, social interaction, and written composition. The pattern has much in common with the idea of "instructional chains" in the teaching of argument that VanDerHeide and Newell (2013) describe. While Ms. Edsel prepared students to write an extended definition, the students' composing would depend on their command of argument. In this case, the teacher moved students forward in a scaffolded sequence to prepare them to write logically about an abstract concept.

In the next chapter, I will look at the written product that followed from the sequence of discussions. In interviews, the teacher and her students report their sense of the importance of the discussions to the composing process. I will look also at other classes and other teachers, in both high school (Chapter 7) and a community college (Chapter 8), to confirm that similar discussion sequences exist, with teachers and learners aware of the function of discussion in service of inquiry and writing.